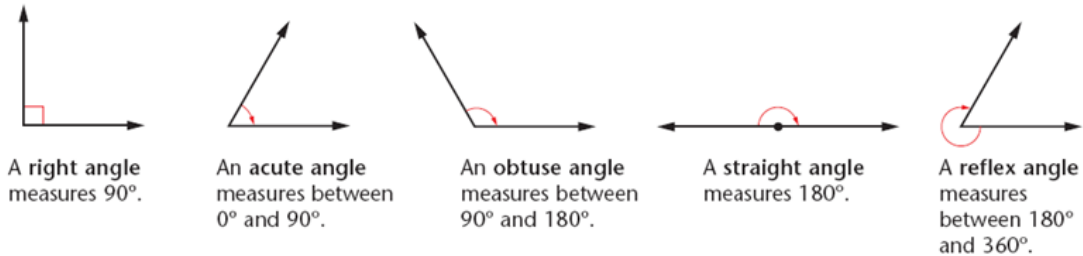


Unit 5 Geometry Resource Sheet

Classifying Angles

Angles may be classified according to their size.



Supplementary Angles - two angles whose measures add up to 180 degrees.

Vertical Angles - angles opposite each other, with no sides in common, formed from two intersecting lines. They are equal in measure.

Adjacent Angles - two angles with a common side that do not otherwise overlap.

$m\angle abc$ is read as the “measure of angle abc”

Transversal – a line that crosses two lines

Any 2 angles formed by one of the lines and the transversal are either vertical or supplementary angles.

Any pair of angles *between* 2 parallel lines that are on *the same side* of the transversal are supplementary angles.

Examples $\angle b$ and $\angle d$ in Figure 3 are vertical angles. They have the same measure.
 $\angle a$ and $\angle b$ are supplementary angles. The sum of their measures is 180° .

Example $\angle c$ and $\angle f$ in Figure 3 are supplementary angles. The sum of their measures is 180° .

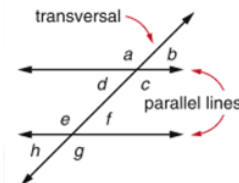


Figure 3

The Measures of the Angles of Polygons

Any polygon can be divided into triangles.

- ◆ The measures of the three angles of each triangle add up to 180° .
- ◆ To find the sum of the measures of all the angles inside a polygon, multiply the number of triangles in the polygon by 180° .

Polygon	Measure of the angles
triangle	180°
quadrangle	360°
pentagon	540°
hexagon	720°

Finding the Measure of an Angle of a Regular Polygon

All the angles of a regular polygon have the same measure. So the measure of one angle is equal to the sum of the measures of the angles of the polygon divided by the number of angles.

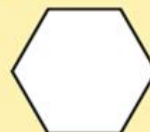
Example

What is the measure of one angle of a regular hexagon?

The sum of the measures of the angles of *any* hexagon is 720° .

A regular hexagon has six congruent angles.

The measure of one angle of a regular hexagon is $720^\circ/6 = 120^\circ$.



regular hexagon

(6 congruent sides and 6 congruent angles)